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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/530,196	08/22/2000	Nobuo Kimura	31981-160441	2129

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EXAMINER

JOHNSON, EDWARD M

ART UNIT

PAPER NUMBER

1754

DATE MAILED: 03/10/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/530,196

Applicant(s)

KIMURA ET AL.

Examiner

Edward M. Johnson

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 17 December 2003.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-22 is/are pending in the application.
- 4a) Of the above claim(s) 21 and 22 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-20 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless -

(a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 1-5 are rejected under 35 U.S.C. 102(a) as being anticipated by WO98/43733 (U.S. Pat. No. 6,306,796 referred to for translation).

Regarding claim 1, Suzue '796 discloses a photocatalyst comprising a photocatalyst which is laminated as a film onto a substrate (see column 3, lines 33-40), which may be metal (see column 3, line 41; lamination involves heat and pressing). Suzue '796 does not irradiate UV rays in UV-A range at a strength of 3 mW/cm² under an atmospheric temperature of 25 °C and relative humidity of 70%, the conditions upon which the recitation "capable of decomposing triolein at a rate of 5 µg/cm²/day" is made contingent. Therefore, the claim is considered to be anticipated. Further, the recited physical properties appear to be inherent characteristics of the photocatalyst produced in the

manner disclosed in Suzue '796, since it is produced with the same lamination step.

When the examiner has reason to believe that the functional language asserted to be critical for establishing novelty in claimed subject matter may in fact be an inherent characteristic of the prior art, the burden of proof is shifted to Applicants to prove that the subject matter shown in the prior art does not possess the characteristics relied upon. *In re Fitzgerald et al.* 205 USPQ 594.

Regarding claims 2-3, Suzue '796 discloses various resins with silicate (see column 4, lines 1-8) and polymerization of the silicate (see column 6, lines 1-2).

Regarding claim 4, Suzue '796 discloses polyvinyl chloride (see column 5, lines 63-66).

Regarding claim 5, Suzue '796 discloses 20 microns (see column 5, lines 56-58).

3. Claims 1-18 are rejected under 35 U.S.C. 102(b) as being anticipated by WO97/00134 (U.S. Pat. No. 6,228,480 referred to for translation).

Regarding claim 1, Kimura '480 discloses a photocatalyst-carrying structure comprising a photocatalyst film laminated (see column 15, lines 44-46 and column 37, lines 12-15; laminating involves heat and pressing) onto a metallic substrate

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(see column 4, lines 8-9). Kimura '480 does not irradiate UV rays in UV-A range at a strength of 3 mW/cm² under an atmospheric temperature of 25 °C and relative humidity of 70%, the conditions upon which the recitation "capable of decomposing triolein at a rate of 5 µg/cm²/day" is made contingent. Therefore, the claim is considered to be anticipated. Further, the recited physical properties appear to be inherent characteristics of the photocatalyst produced in the manner disclosed in Suzue '480, since it is produced with the same lamination step. See *In re Fitzgerald et al.*, supra.

Regarding claims 2-4 and 13-17, Kimura '480 discloses a colored steel or aluminum plate (see column 13, lines 11-25), polyvinylchloride and polymethylmethacrylate resins (see column 14, lines 16-25).

Regarding claims 5, 9, and 12, Kimura '480 discloses 5 microns or less (see column 10, lines 57-63).

Regarding claim 6, Kimura '480 discloses a silane coupler (see column 7, lines 39-41).

Regarding claim 7, Kimura '480 discloses 0.001-5% silicon compound in the solution (see column 8, lines 58-61) and 10-50% silicon-modified resin (see column 8 lines 1-3).

Regarding claim 8, Kimura '480 discloses 0.001-5% silicon compound in the solution (see column 8, lines 58-61) and methyl

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trimethoxysilane (see column 9, lines 16-18) as silicon compound, which is in an amount of 0.001 to 5% (see column 9, lines 26-30).

Regarding claim 10, Kimura '480 discloses 0.1-30% metal oxide sol (see column 9, lines 52-53) and titanium dioxide in an amount of 5% (see column 33, lines 28-30 and Table 6).

Regarding claim 11, Kimura '480 discloses silica sol acidified with nitric acid (see Examples 74-77) 2-60% silicon and 5-40% colloidal silica (see column 3, lines 35-38).

Regarding claim 18, Kimura '480 discloses coating by dipping, drying the adhesive layer (see Examples 67-71), adding a silane coupler (see column 7, lines 39-41) and laminating (see column 15, lines 44-46 and column 37, lines 12-15).

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 19-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over WO '134 (translation in Kimura '480).

Regarding claims 19-20, Kimura fails to disclose signboards and other signs.

It is considered that it would have been obvious to one of ordinary skill in the art at the time the invention was made to use the photocatalyst film of Kimura on signboards and other signs because Kimura discloses applying the film to glass, plastics, metals, wooden doors (see column 4, lines 5-12), cars, buildings, show cases, opaque material, wall papers, and decorations sheets, which would obviously, to one of ordinary skill, suggest signs or sign boards, which may be found on buildings, cars, and/or show cases (see column 14, lines 4-35).

Response to Arguments

6. Applicant's arguments filed 12/17/03 have been fully considered but they are not persuasive.

It is argued that this reference WO/98/43733 does not constituted a reference under... instant application. This is not persuasive because Applicant relies on a priority date that has not yet been perfected, since no translation of the foreign language application has been submitted. Applicant's filing date, until perfection of priority, is the international filing date of Nov. 5, 1998. Since the cited reference was published on Oct. 8, 1998, it qualifies as prior art under 35 USC §102(a).

It is argued that Applicants respectfully traverse the rejection... under 35 U.S.C. 102(b). This is not persuasive because Applicant's international filing date is Nov. 5, 1998 and the cited reference was published in January 1997, which is more than a year before then.

It is argued that the Kimura U.S. counterpart... the rejected application claims. This is not persuasive because Kimura discloses lamination, which inherently involves heat and pressing. It is also noted that Applicant relies on process of making features (heat-pressing, laminating, etc.), which are generally not accorded undue weight in product claims.

Conclusion

7. The Examiner informally suggests that "Fig. 1" be deleted from the drawing, since it is the only drawing in the application.

8. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will

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expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Edward M. Johnson whose telephone number is 571-272-1352. The examiner can normally be reached on M-F 9:30-6:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Stanley S. Silverman can be reached on 571-272-1358. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 872-9306 for regular communications and (703) 872-9306 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 571-272-0987.

EMJ
March 4, 2004


STANLEY S. SILVERMAN
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 1700